

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 December 2004 (09.12.2004)

PCT

(10) International Publication Number
WO 2004/107589 A3

- (51) International Patent Classification:
H04L 12/28 (2006.01) *G06F 15/16* (2006.01)
- (21) International Application Number:
PCT/KR2004/000283
- (22) International Filing Date:
12 February 2004 (12.02.2004)
- (25) Filing Language: Korean
- (26) Publication Language: English
- (30) Priority Data:
10-2003-0034962 30 May 2003 (30.05.2003) KR
10-2004-0007868 6 February 2004 (06.02.2004) KR
- (71) Applicant (for all designated States except US): LG ELECTRONICS, INC. [KR/KR]; 20, Yoido-Dong, Yongdungpo-Ku, Seoul 150-010 (KR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BAEK, Seung-Myun [KR/KR]; Lucky Apt. 12-403, Banlim-Dong, Changwon-Shi, Kyungsangnam-Do 641-764 (KR). LEE, Koon-Seok [KR/KR]; Sungwon Apt. 102-1406, 45-1 Sangnam-Dong, Changwon-Shi, Kyungsangnam-Do 641-778 (KR). CHOI, Hwan-Jong [KR/KR]; 909-13, Manduk 3-Dong, Buk-Ku, Busan 616-829 (KR). KIM,

Yong-Tae [KR/KR]; Daedong Apt. 1006-1504, Seok-bongmaeul, Mukea-Ri, Jangyou-Myun, Gimhae-Shi, Kyungsangnam-Do 621-833 (KR). KOO, Feel-Young [KR/KR]; Keukdong-Villa No. 407, 542, Minrak-Dong, Suyoung-Ku, Busan 613-829 (KR). KOO, Ja-In [KR/KR]; 336-28, Hadae-Dong, Jinju-Shi, Kyungsangnam-Do 660-997 (KR). KANG, Seong-Hwan [KR/KR]; 1128, Keunmeum-Ri, Seolcheon-Myun, Namhae-Kun, Kyungsangnam-Do 668-891 (KR).

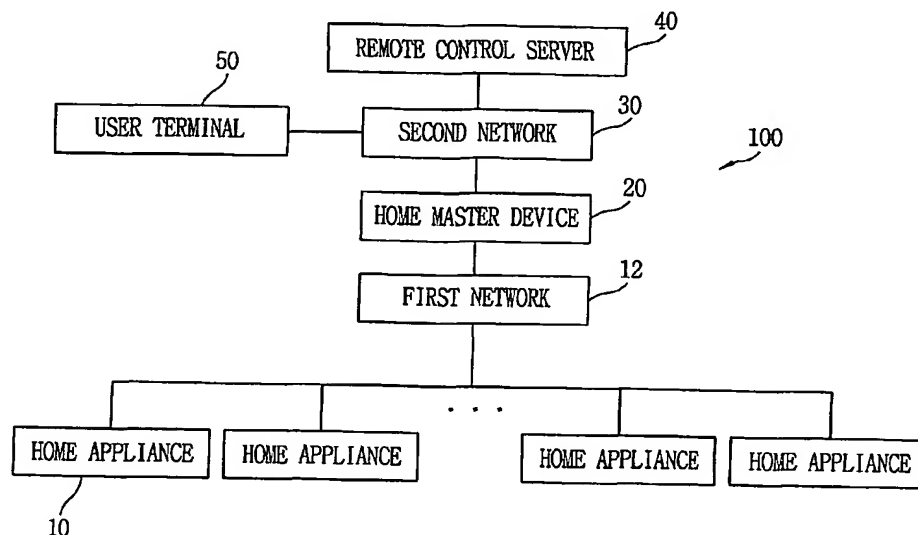
(74) Agent: LEE, Kwang-Yeon; LEE & KIM, 5th Floor, New-Seoul Bldg., 828-8, Yoksam 1-Dong, Kangnam-Ku, Seoul 135-935 (KR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: HOME NETWORK SYSTEM



(57) Abstract: The present invention discloses a home network system (100) which can achieve communication between a home master device (20) and a remote control server (40) by using a predetermined message structure. The home network system (100) includes a home master device (20) connected to a plurality of home appliances (10), and a remote control server (40) connected to the home master device (20) through a first network (12), for transmitting/receiving a message between a user terminal (50) and the home master device (20). The message transmitted/received between the home master device (20) and the remote control server (40) includes at least a product code unit of the corresponding home appliance (10), a message code unit for notifying a transmission/reception direction of the message, parameter units under the definition of the message, and a number unit of parameters.



GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

31 August 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR 2004/000283

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁸: **H04L 12/28** (2006.01); **G06F 15/16** (2006.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁸: G06F, H04LDocumentation searched other than minimum documentation to the extent that such documents are included in the fields searched
----Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
WPI, EPODOC, TXTDE, TXTEN, INSPEC, IEE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Koon-Seok Lee, Hoan-Jong Choi, Chang-Ho Kim, Seung-Myun Baek: 'A new control protocol for home appliances-LnCP'. In: International Symposium on Industrial Electronics, 2001. Proceedings. ISIE 2001. 12-16. June 2001. Pages: 286-291, Volume 1. <i>the whole document, especially pages 290-291</i> --	1-39
A	Koon-Seok Lee, Kyung Chang Lee, Suk Lee, Ki-Tae Ohn, Seung-Myun Baek: 'Network configuration technique for home appliances based on LncP'. In: IEEE Transactions on Consumer Electronics, IEEE Service Center, New York. May 2003. Pages: 367-374, Volume 49, Issue 2. <i>the whole document, especially pages 369-371</i> --	1-39

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
23 June 2006 (23.06.2006)Date of mailing of the international search report
6 July 2006 (06.07.2006)Name and mailing address of the ISA/ AT
Austrian Patent Office
Dresdner Straße 87, A-1200 ViennaAuthorized officer
STOLL J.

Facsimile No. +43 / 1 / 534 24 / 535

Telephone No. +43 / 1 / 534 24 / 550

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR 2004/000283

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003/0088703 A1 (KIM) 8 May 2003 (08.05.2003) <i>abstract, figures 1, 4-5, description of figures, claims 1-2, 4-10, 12-14</i> --	1
A	US 2003/0074460 A1 (SOEMO ET AL.) 17 April 2003 (17.04.2003) <i>abstract, figures 2-20, description of figures</i> --	1
A	EP 1 265 405 A1 (MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.) 11 July 2002 (11.07.2002) <i>abstract, figure 4, description of figure</i> ----	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inter

nal application No.

PCT/KR 2004/000283

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
A				none			
EP	A1	1265405	2002-12-11	US	A1	2003037166	2003-02-20
				WO	A1	02054682	2002-07-11
				CN	A	1437814	2003-08-20
				JP	A	2001028601	2001-01-30
US	A	20030074460		none			